

**Amendment Under 37 C.F.R. § 1.111**  
**U.S. Serial No. 09/881,782**

C1  
E1  
structure on said buffer layer, and a window layer comprising an electrically conducting transparent oxide crystal layer on said group-III nitride crystal layer, wherein at least a second conduction-type surface ohmic electrode conductive with said window layer is between the surface of said group-III nitride crystal layer and said window layer and comes into contact with the surface of said group-III nitride crystal layer, the whole of a pad electrode for wire bonding is on the center of the upper surface of said window layer, and said second conduction-type surface ohmic electrode is composed of a plurality of electrodes and does not exist below said pad electrode.

2. (Amended) The group-III nitride semiconductor light-emitting diode as claimed in claim 1, wherein said second conduction-type surface ohmic electrodes are disposed in a periphery of said pad electrode.

3. (Amended) The group-III nitride semiconductor light-emitting diode as claimed in claim 1 or 2, wherein said second conduction-type surface ohmic electrodes are disposed at a bilaterally symmetric position with respect to the center of said pad electrode.

E1  
C2  
5. (Amended) The group-III nitride semiconductor light-emitting diode as claimed in claim 1 or 2, wherein said second conduction-type surface ohmic electrodes are composed of a plurality of electrodes disposed at equal intervals.

6. (Amended) The group-III nitride semiconductor light-emitting diode as claimed in claim 1 or 2, wherein said second conduction-type surface ohmic electrodes are disposed in an open light-emitting region other than a projective region of the pad electrode on the surface of said group-III nitride crystal layer.

sub D2  
C3  
11. (Twice Amended) An electrode for group-III nitride semiconductor light-emitting diodes for a group-III nitride semiconductor light-emitting diode comprising at least a gallium nitride (GaN)-based group-III nitride crystal layer having a light-emitting part of a hetero-junction structure, and a window layer comprising an electrically conducting transparent oxide crystal layer provided on said group-III nitride crystal layer, wherein at least a surface ohmic electrode conductive with said window layer is between the surface of said group-III nitride crystal layer and said window layer and comes into contact with the surface of said group-III nitride crystal layer, the whole of a pad electrode for wire bonding is on the center of the upper surface of said window layer, and said surface ohmic electrode is composed of a plurality of electrodes and does not exist below said pad electrodes.

E1  
12. (Amended) The electrode for group-III nitride semiconductor light-emitting diodes as claimed in claim 11, wherein said surface ohmic electrodes are disposed at a position in a periphery of said pad electrode.

13. (Amended) The electrode for group-III nitride semiconductor light-emitting diodes as claimed in claim 11 or 12, wherein said surface ohmic electrodes are disposed at a bilaterally symmetric position with respect to the center of said pad electrode.

E1  
C4  
15. (Amended) The electrode for group-III nitride semiconductor light-emitting diodes as claimed in claim 11 or 12, wherein said surface ohmic electrodes are composed of a plurality of electrodes disposed at equal intervals.

16. (Amended) The electrode for group-III nitride semiconductor light-emitting diodes as claimed in claim 11 or 12, wherein said surface ohmic electrodes are disposed in an open

C4  
E1 light-emitting region other than a projective region of the pad electrode on the surface of said group-III nitride crystal layer.

18. (Amended) The electrode for group-III nitride semiconductor light-emitting diodes as claimed in claim 11 or 12, wherein the group-III nitride crystal layer in contact with said surface ohmic electrodes comprises gallium phosphide nitride represented by  $\text{GaN}_{1-x}\text{P}_x$  wherein  $0 < x < 1$ .

19. (Twice Amended) A method for producing an electrode for group-III nitride semiconductor light-emitting diodes, comprising  
forming a plurality of surface ohmic electrodes in contact with a surface of a gallium nitride (GaN)-based group-III nitride crystal layer having a light-emitting part of hetero-junction structure,

then covering the surface of said group-III nitride crystal layer and said surface ohmic electrodes to form a window layer comprising an electrically conducting transparent oxide crystal layer conductive with said surface ohmic electrodes, and

then forming a whole of a pad electrode for wire bonding on a center of the upper surface of said window layer conductive with said window layer, wherein said surface ohmic electrodes do not exist below said pad electrode.

21. (Twice Amended) A group-III nitride semiconductor light-emitting diode comprising at least a first conduction-type single crystal substrate provided with a first conduction-type back-surface ohmic electrode on a back surface thereof, a buffer layer comprising a boron phosphide (BP)-based material on a front surface of said single crystal substrate, a gallium

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nitride (GaN)-based group-III nitride crystal layer having a light-emitting part of hetero-junction structure on said buffer layer, and a window layer comprising an electrically conducting transparent oxide crystal layer on said group-III nitride crystal layer, wherein at least a second conduction-type surface ohmic electrode conductive with said window layer is between the surface of said group-III nitride crystal layer and said window layer is disposed in an open light-emitting region other than a projective region of a pad electrode on the surface of said group-III nitride crystal layer, a pad electrode for wire bonding is on the center of the upper surface of said window layer, and wherein a sum of areas of said second conduction-type surface ohmic electrodes is from 5 to 30% of a total area of said open light-emitting region and said buffer layer is composed of an amorphous body in the as-grown state.

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